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PROF. SCHULTZ'S EXPERIMENTS ON DIGESTION.

[Concluded from page 222.]

I MUST now speak of diseased excitement of the motion of the stomach. There is another circumstance which causes a morbidly quick motion of the food from the stomach into the intestines, namely, too great fluidity. We have already seen, that the food, corresponding to its time of continuance in the stomach, becomes more or less consistent. This happens, also, with liquid articles of food, for milk is changed in the stomach of calves into a cheesy lump of almost stony hardness, from which all the whey has disappeared. In milk this is caused, evidently, by its speedy coagulation, and the absorption of the whey by the vessels of the stomach; and in other liquids which are not coagulable, by the simple absorption of their fluidity. It must not be supposed that watery food is in itself hurtful to the digestion, for its fluidity is absorbed and the solid matter remains behind. However, there are fluids which, from their stimulating or indigestible qualities, either always, or only under certain circumstances, quicken the motion of the stomach so much, that the fluidity cannot be absorbed before it, as well as the solid parts, are removed from the stomach without being digested. This, it appears to me, is the cause of the prejudicial effects of milk, raw eggs, coffee, &c., which I have observed, partly upon myself and partly upon animals.

Milk, particularly in weak stomachs, quickens the motion of that organ so much, that even before it is coagulated it disappears through the pylorus. The digestion of the food with which the milk is taken will hereby be disturbed, and as it goes mostly undigested into the intestines, will also cause a disturbance of the *cæcal* digestion, which will be followed by diarrhœa. The action of beer, particularly only half-fermented beer, is similar.

The same is the case with the raw yolk of eggs, the nourishing properties of which I do not dispute, but merely maintain, that in weak stomachs it is hardly digestible. Hard-boiled eggs are more easily digested than raw, as they do not excite the motion of the intestines.

The effects of cold water are also similar. However, here it is not the water, but merely the cold which improperly affects the motion of the stomach, for in weak stomachs hot water always produces the most beneficial effects.

Of all fluids, the prejudicial action of coffee is the greatest. The carbonization of a part of its oil during roasting, appears to be the cause of

this property. It is not merely itself indigestible, but also makes all other food with which it is taken, likewise indigestible. From its stimulating properties the motion of the stomach is so greatly increased, that its whole contents disappear before they are digested. This, in the healthy state, and when the stomach is overcharged, may relieve those complaints which are mechanically produced by the distention of the stomach, and it has therefore been generally thought that coffee promotes digestion. However, in fact, it disturbs it, and can only cause a momentary relief, which is presently followed by a greater evil, namely, a disturbed *cæcal* digestion. It is evident that coffee taken in the morning, when the stomach is empty, cannot have this effect, for it can only go quickly through the intestines to the already digested excrement, without disturbing the digestion of other food.

There still remains something which requires illustration, namely, how the stomach of amphibious animals and fishes, which is nearly uniformly extended on all sides, or at least whose small curvature is but little shortened, can detain its contents so long as is usual in these animals. The reason of this may be easily perceived if we consider that the peristaltic motion is here so slow and weak, that it is hardly to be recognized, and has been, indeed, altogether denied by several naturalists.

The degree of digestibility of meat is different, according to the way in which it is prepared, and also according to the different animals, and the parts from which it is taken.

Roasted meat is harder to digest than either boiled or raw. Its more difficult digestibility is probably caused by the partial carbonization and hardening of its muscular fibres, which even after separation from one another, go over into the intestines mostly unchanged, while the fibres of boiled meat are entirely dissolved. That according to the degrees of roasting, gradual approximation to boiled meat may take place, is self-evident.

Smoked or salted meat, such as ham, is easier to digest than roasted, and harder than boiled meat. To preserve the meat from spoiling, it is saturated with the carbon of the smoke, and is rendered the more indigestible the more it is smoked, and in consequence dried. All substances which are used for the preservation of meat, render it, at the same time, indigestible, as it thereby becomes less soluble, for the most easily decomposable meats are in general the most easily digestible. Fat, particularly when surrounded by cellular tissue and thoroughly smoked, is still less digestible than roasted meat.

Cheese, new as well as old, is nearly as digestible as boiled meat; nevertheless, its peculiar volatile part brings much foreign matter into the blood, which strongly stimulates the secreting organs, and gives rise to various complaints of the bladder. I have found that the flesh of the lower animals is in general harder to digest than that of the higher classes, and the easiest of all is the flesh of the *mammalia* and birds. Fish boiled, as well as salted, such as salmon, herring, &c., is harder to digest than the roasted flesh of the *mammalia*, and roasted and salted fish more so than boiled. The flesh of the *crustacea*, as is shown by my experiments upon crab's flesh, is still more indigestible and injurious,

and is not in the least altered, even when the roasted meat begins to be digested. This explains the fact that fish and crustacea require very healthy digestive organs to be digested, and very easily excite intermittent fevers in people who are a little disposed to disease. I am acquainted with an example of this in the village of Binnenwalde, near Rheinsberge, where, during autumn, a great many people were afflicted with an intermittent fever every Wednesday and Saturday. Upon further inquiry, it was found that, at this season of the year, the Tuesdays and Fridays were employed in fishing, and that most of the inhabitants ate fish in the evening or on the following day. With the changing of the day for fishing, the day upon which the fever broke out changed also; and when I explained to the people the effects of fish, and the sickly ate no more, the fever became more rare, and at last ceased entirely.

The violent fits of illness which in many people follow the eating of crabs, &c., and even the poisonous effects of certain fishes, appear to arise from their general indigestibility.

Oysters are the only exception to the indigestibility of the flesh of the lower animals. Nevertheless, that there is a certain similarity between them and fish, is shown by their frequent poisonous effects. It is also not known whether the oysters are really quickly digested, or whether, from an excitement of the motion of the stomach, they go speedily through the intestines, either partly or wholly unchanged. This is the more probable, as in many people they are apt to produce diarrhoea. The chyme, also, of oysters is much less acid than that of meat.

The boiled flesh of fowls and pigeons I found was easier to digest than boiled beef or veal. In general, the flesh of young animals, especially veal, appears to excite the motion of the stomach, and by causing diarrhoea, to render its digestion less perfect than that of the flesh of full-grown animals. I have not observed any difference in the digestibility of the lean parts of mutton, pork or beef, although pork and mutton are generally less digestible, on account of the larger quantity of fat which they contain.

In all these different sorts of meat I have observed that their digestibility is much promoted by a perfect distinction of their living principle, by allowing them to hang in the air more or less time, according to the season of the year. I have often seen in cats and dogs, that the flesh of old animals, boiled perfectly fresh, is as indigestible as when eaten raw, and in man, also, with a weak digestion, the same difference in the digestibility of fresh and stale meat may be observed. The flesh of domestic animals, by becoming a little stale, is more easily digested, and is then, also, more digestible than that of wild animals. Among these latter, venison and wild boar are hardest to digest.

In general, it may be inferred from my observations, that it is of great importance to establish a difference between the digestibility and nourishing properties of food, since very nutritious but indigestible substances, such as smoked and roasted meat, are often more injurious than such as are less nutritious but easily digested, as the finer vegetables, spinach, asparagus, &c.

On the other hand we must not determine upon the digestibility, or at

least the nourishing properties of food, from the feeling of facility with which it is removed from the stomach. All those kinds of food which, by strongly exciting the motion of the stomach, go quickly into the intestines, may be easily borne by the stomach, but are very imperfectly dissolved, and at last are followed by all the consequences of disturbed digestion. They afford the body, therefore, only a very small quantity of digestible matter, and are again excreted mostly unchanged. On the contrary, there are other kinds of food which, on account of their long continuance in the stomach, appear for the moment to be hard to digest, yet are nevertheless perfectly digestible, and never followed by bad consequences upon passing into the rest of the intestines.

There are, therefore, really indigestible substances which, under certain circumstances, and taken in moderate quantity, are easily borne by the stomach, for instance, oysters, milk, eggs, coffee, &c.; and there are, also, substances easily digestible, which sometimes appear to be less easily borne by the stomach, as is sometimes the case with boiled meat, particularly when taken in large quantities, which, on account of their perfect chymification, always remain longer in the stomach.

SIR B. BRODIE'S CLINICAL REMARKS ON MORTIFICATION.

INFLAMMATION may terminate in mortification, but mortification may arise from a number of other causes, as well as inflammation. Some particular inflammations are more likely to terminate in mortification than others, as when they are produced by the bites of venomous reptiles or from wounds. A local injury may bring on inflammation, and this may bring on mortification; but an injury may be so great that the part which receives the injury loses its vitality at once, therefore local injury may bring on mortification in two ways; first, by producing inflammation, and then the inflammation terminating in mortification; and secondly, by destroying the vitality of the part at once. Some parts of the body are more liable to become mortified than others. These parts are the cellular membrane, because it has a lower vitality than some other parts; therefore it is more disposed to become mortified than the skin, because it has less vitality. The skin more readily mortifies than the muscles, for the same reason; this is often proved from the effect of blows on, or fractures of, the leg and thigh. The integuments swell up, and after a day or two, you will feel an emphysematous crackling beneath the skin when you press upon it. Now, in such a case, if you cut down upon the cellular membrane beneath the skin, you will find it dead. Not only are some parts of the body more disposed to mortify than others, but there are some constitutions which are more predisposed to take on mortification than others. Those who are addicted to drinking ardent spirits; those whose constitution has been shattered by repeated attacks of disease, or indulgence in vicious habits, are more prone to mortification after the receipt of a local injury, so much so, that in all such cases you will find that the effect resulting from the injury is beyond all proportion to its cause. If any fluid, as

urine for instance, gets into the cavity of the peritoneum, it brings on inflammation; but if it gets into the cellular membrane, you will find that mortification will come on; will find the patient's pulse will be full and frequent, and not hard, as you might expect in inflammation, and that the part is swollen. You put your hand over it, and you feel, as I have before said, an emphysematous crackling upon making slight pressure; the skin is hot, and if the inflammation be extensive, there is hiccough, the belly is blown up with air, the pulse soon gets feeble, delirium ensues, and the patient dies. Where there is internal mortification, the symptoms are the same. If the patient dies of mortification of an external part, it is generally the cellular membrane that is mortified. But will not the skin also get mortified? Most certainly it will, if you do not prevent it. And how do you prevent it? Why, by making free scarifications through the skin down to the cellular membrane, and setting free the tension under which it labors; and if you do this in good time, you will generally prevent the progress of the mortification altogether.

Whenever you suspect that the cellular membrane is mortified (and you will have the emphysematous crackling when that occurs), make free scarifications, and let out the putrid exhalations beneath, which are poisoning the system. Having made the scarifications, the other local treatment should consist of poultices and fomentations. You may apply, as a wash, a solution of the chloride of soda; if it does no other good, it will take off the offensive putrid odor of the parts.

With respect to the constitutional treatment, no general rule can be laid down. In some cases, where there is much inflammatory action, purgatives and diaphoretics must be given; but when the inflammation has subsided, you must leave off the antiphlogistic remedies, and give stimulants, to excite the system, but never to such an extent as to produce fever. For such a purpose you may administer either opium or ammonia. But suppose that a mortified part separates, we call that the process of sloughing. We know but very little of the physiology of this process, which may be described best to you as a peculiar form of ulceration. Whilst this process is going on, you must encourage it by the constant application of fomentations and poultices. Ulcers may, perhaps, form from the scarifications you have made, and these must be treated according to the rules I laid down to you when speaking of them. But you will, perhaps, ask—may you not amputate when mortification is going on? I think you may. Of course you would not amputate when mortification in the cellular membrane is complete: you are told to scarify, and what, I would ask, is amputation, but scarification in a more extended sense of the word? When mortification is the consequence of contusion, it is to be treated as contusion. You will feel the emphysematous crackling of mortification; scarify the parts, therefore, immediately, and you will save the skin.

Old persons are very subject to ossification of the arteries; the femoral, popliteal and peroneal arteries sometimes ossify, and if the ossified arteries contract, the patient will be very likely to have inflammation of the toes, terminating in mortification. The symptoms by which you may

know this are pains in the toes ; the foot and leg will become œdematous ; or perhaps, from a trifling accident, some inflammation is produced, and in both these cases mortification comes on ; at another time, perhaps, the patient finds his feet get very cold ; he immediately applies external warmth, and takes some internal stimulant, and the mortification is averted ; but if, on the other hand, it be neglected, the foot becomes white and cold, the patient complains of great pain, and the toes begin to mortify at their extremities ; in either way the progress of the mortification is different. It is sometimes rapid, when it obtains the title of "acute," the skin will become hot, the tongue loaded, the pulse rapid and frequent, the mortification will spread over the foot, delirium will ensue, and death will be the result ; or it may, on the other hand, be slower in its progress, when you will have a feeble pulse and a cold clammy skin ; the patient falls into a state of coma, and dies. The mortification that comes on in the toes, from ossification of the arteries in the leg and thigh above, may be very likely to destroy life, but will not always do so. When, in such a case, inflammation ends in mortification, if the pulse indicates fulness, it may become a question whether blood should be taken from the arm. The result of my experience in such cases is, that such a practice would prove unsuccessful to the safety of the patient. With respect to local remedies in such a case, you must keep the parts warm ; if there be, however, much heat and inflammation about them, you must apply cold lotions, or warm fomentations and poultices, according to circumstances. Some surgeons recommend you to rub the leg above with stimulating liniments, but I do not think that they do any good. Keep your patient quiet in bed ; if there be much pain, give him *opium* ; I do not know that it is of much service, except where there is severe pain, when you must give it in large doses, in the proportion of one grain every four hours. You may give stimulants internally, for although you cannot increase the diameter of the ossified arteries, you can increase the velocity of the circulating blood. For this same purpose you may give your patient a little wine, but not sufficient, of course, to produce fever. In cases of this kind, where persons have been accustomed to drink a great deal of wine, it may be necessary sometimes to give them as much as a bottle a day. My own opinion as to the employment of stimulants in these cases, induces me to prefer ammonia to all others. You may, for this purpose, give your patient six grains of carbonate of ammonia every four hours. The parts affected with mortification become putrid, and in process of time they separate. This process of separation occurring in the foot, is very slow and tedious, because it has to slough through tendons, ligaments and bones. It therefore becomes a question, whether you are to amputate in these cases of mortification, caused by ossified arteries, and when are you to do it ? If things proceed favorably, the parts will separate, in time, of their own accord, and nature will make a very good stump, with a little assistance of the surgeon's saw in getting through the bone. But there is another question, with reference to this subject, and that is, should you amputate during the progress of mortification ? I always oppose it. I think that you should never amputate

under these circumstances ; but it is done, however, in some cases by some surgeons. In old persons who die of mortification of the toes, the femoral artery is very commonly contracted in its diameter. Now, whether this is caused by inflammation of its coats or not, I do not know.

There is another disease of the arteries causing mortification, but I have only seen three cases of the kind. One was an obliteration of the artery, caused by inflammation of its coats ; the symptoms were pain and tenderness in the course of the artery. In this case the sloughing process proceeded favorably, and the parts separated down to the bone, which I sawed through, and a good stump was formed. Now, why does not mortification ensue after applying a ligature to the femoral artery ? If you tie an artery, the obliteration is only in the trunk of the artery, but not in the anastomosing branches ; but in a case like the one I have just named, it is not only in the main trunk, but in the branches of that main trunk also. Mortification will also occur in the toes after typhous fever. In such a case it is, of course, owing to a languid circulation, and from this cause parts at the extremities may also become mortified, after other severe diseases. Besides the causes which I have already mentioned, there are various others that may produce mortification, such as the actual cautery, and the various caustics, which act by destroying the vitality of the part to which they are applied. The actual cautery acts mechanically, and the caustics chemically ; but there is one caustic, however, which operates only on the vitality of the part to which it is applied, and not chemically ; this is arsenic. The other caustics act on the dead body, but arsenic does not. Mortification, when caused by the use or abuse of these caustics, requires the same local treatment which I have before described ; you must apply poultices and fomentations, and wait for the process of suppuration. Indeed, in such cases as these, a surgeon should do but little. He should look to the constitution, and judge if it is able to go through what is required ; if so, you should let nature effect the cure, but if the constitution be too weak to bear the process of the separation of the parts, then the surgeon must act according to the circumstances which present themselves. Of the surgical nomenclature used for this affection, I should have spoken to you first. You will meet in authors with the words gangrene and sphacelus. The first of these signifies that period when the parts are not quite dead ; the second means that period when the mortification is complete. From gangrene the patient may recover, from sphacelus never.—*Lancet*.

VESICULAR SMALLPOX—AN EXPERIMENT, &c.

To the Editor of the Boston Medical and Surgical Journal.

DEAR SIR,—About ten years ago vesicular smallpox was brought from New York to Northampton, where I then resided. There occurred, probably, in the village, one hundred cases in all ; in the unprotected perhaps twenty, of which a majority died. In its mitigated form, called "varioid," those who had previously had smallpox were as suscep-

tible of the disease, in proportion to their numbers, as those who had been vaccinated. In both the latter the disease was comparatively mild, and, under other circumstances, might have been mistaken for chicken-pox, which it very much resembled.

At this time I persuaded Thos. Cole, who lived in a remote part of the town, to be inoculated with matter which I had taken from a *varioid vesicle*. His family consisted of himself (unprotected either by smallpox or cowpox); his wife, who had smallpox by inoculation forty years before; and their two sons, both of whom had been vaccinated. In proper time (seven or eight days after inoculation) Cole had the "symptoms" pretty smartly for one day, which subsided and ceased on the appearance of one large, mammoth vesicle on his forehead. I watched this case with some solicitude, and as the rest of the family were protected, I had no fears on their account. But in due time (about seven days) Thos. Cole, Jr., a son, who had been vaccinated, took on the "symptoms," and had a full crop of varioid vesicles. By this time Mrs. Cole, who had not been in our councils, began to suspect "foul play," and she charged me directly with having given to her husband and son the smallpox, which she said she recognized from the symptoms. But she had no apprehension for herself, as she had had the smallpox. Notwithstanding her confident security, within the week she took on disease, and had varioid more severely than either her husband or son. The other son was confined, at the time, of continued fever, and though in the same room with the family, escaped the disease.

Pustular smallpox and cowpox equally render the system less susceptible of the infection of vesicular smallpox, and though not a perfect protection, they disarm the disease of its virulence, and afford the best and only security we have. If it should appear, as I confidently think it will, that vesicular smallpox is a distinct disease, it will give a new direction to the inquiries of medical men, and a future Jenner may discover a substitute as mild and as effectual as is cowpox for pustular smallpox.

Respectfully,

Springfield, Jan. 10, 1840.

JOSEPH H. FLINT.

NOTE.—Is there on record, or in the recollection of any one familiar with vesicular smallpox, a single instance of secondary disease? J. H. F.

HERNIA.

[Communicated for the Boston Medical and Surgical Journal.]

It is computed that one in twelve of all the human race are afflicted with this complaint. It is, to say the least, a very troublesome infirmity, and if neglected or maltreated, it is one which not unfrequently proves fatal. The frequency of its occurrence renders people in some measure insensible to its importance. They go to a truss-maker to be fitted with a truss, and truss-makers generally have a favorite truss which it is for their interest to apply in all cases. It is well known to physicians that

there is a great variety of ruptures, and that they vary in degree and require different treatment. It cannot be expected that a truss-maker should be familiarly acquainted with the anatomical structure of the parts concerned in hernia. It is no disparagement to him to say that this is not expected of him. It would be unwise in him to spend two or three years in acquiring a knowledge of anatomy and physiology. Why, then, should he think it a duty incumbent on him to say what truss is best adapted to any and every variety of rupture? It is the province of an M.D. to determine this.

I am induced to make the foregoing remarks, not from any wish to interfere with the business of truss-makers. The wish to lessen their business is far from me. I wish to see every mechanic, who attends to his business, and is a good workman, have a plenty to do; and usually this is the case. Those who know me best, know that I am a friend to mechanics, and that I patronize them liberally. It has, however, appeared to me for many years that the treatment of hernia ought to be exclusively under the direction of a surgeon, who certainly ought to be best qualified to judge what kind of truss or other application is best adapted to the particular case and to the particular situation, sex and occupation of the patient; and I have recently been made acquainted with a case which confirms me in this opinion. A female friend of mine, who had for many years been suffering from double hernia, and who had employed most of the truss-makers in this vicinity, each of whom applied a different kind of truss, though none of them answered the purpose, at length heard of Dr. E. W. Leach, 134 Hanover street, and that he had, while in Europe, paid particular attention to the subject of hernia, and had been extremely successful in the treatment of this complaint since his return. She sent for him, and he adapted a truss to her particular case, which rendered her very much more comfortable than she had been for many years. Being told by my female friend of this circumstance, I called upon Dr. Leach, for I had myself been troubled with a rupture over twenty years, and had tried all the variety of trusses that came within my knowledge. He immediately fitted me with a truss that I must do him the justice to say, rendered me much more comfortable, and answered the purpose better than any one I had ever tried. I never asked who was the inventor or maker of the truss, nor do I know. Dr. Leach is not wedded to any particular kind of truss, but selects from all kinds the one he thinks best adapted to the particular case which comes under his treatment. I sincerely wish him success.

A PHYSICIAN.

STATISTICS OF MORTALITY IN WILTON, ME.

To the Editor of the Boston Medical and Surgical Journal.

DEAR SIR,—In the discussion now going on in your Journal, relative to dietetics, I noticed the assertion by one of your correspondents that the average mortality in the United States, was about 1 in 40. He sup-

poses it to be in New England, 1 in 41. It seems to me his computation cannot be correct. Would it not be well for medical men, generally, to keep a record of all cases of mortality occurring in their vicinity? There would then be fewer "retailers of hearsay and compilers of facts."

This town has the reputation, in this vicinity, of being quite unhealthy. The past year has been particularly so. Scarlatina, typhous fever and other diseases have prevailed to an unusual degree.

The whole number of deaths in town from Jan. 1, 1839, to Jan. 1, 1840, is thirty-five. Consumption, 6; palsy, 1; dropsy, 1; brain fever, 2; scarlet fever, 3; mortification, 1; old age, 3; dysentery, 2; infants, 6; scrofula, 1; chronic inflammation of the stomach, 1; quinsy, 1; fever, 2; 3 children unknown; stillborn, 2. Sixteen under seven years; nineteen over thirteen, *two males and seventeen females*; 8 between twenty and thirty; 6 between thirty and forty; 1 between fifty and sixty; 3 over eighty. Population of the town, 2300; making the proportion 1 in 65.7.

If you think the above statistics, which have been kept the past year with great care, worthy an insertion in your Journal, you are at liberty to use them.

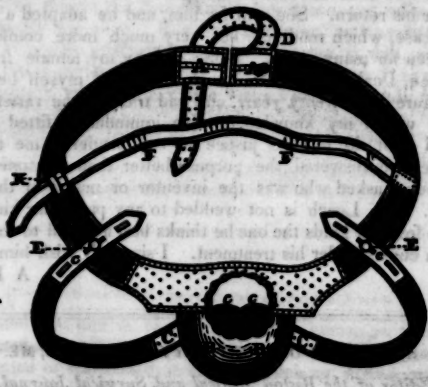
Yours, truly,

Wilton, Me., Jan., 1840.

JOHN BARKER.

IMPROVED NON-ELASTIC SUSPENSORY BANDAGE.

For the immediate relief and permanent cure of Circocoele and Varicocoele, and for supporting the Testicles under all circumstances where support is required. Invented by HEBER CHASE, M.D., of Philadelphia.



Description of the new Suspensory Bandage.—A, A, The band or belt of the suspensory, which passes around the body and is secured by a buckle at D. B, B, The sac to retain the testicles. C, C, The thigh straps, which are attached at one extremity to the lower and posterior part

of the sac at c, c, pass along the sides of the perineum and round the base of the buttocks, continue upward on the outside of the nates and behind the trochanter major, to be attached to the band at E, E, by means of buttons. F, F, The abdominal band which passes across the stomach and is buckled at K, which is intended to prevent the suspensory from falling over the hips. H, H, India-rubber webbing introduced between the more unyielding parts of the suspensory belt. I, I, India-rubber webbing, constituting the middle part of the thigh straps.

This Suspensory Bandage was invented for the cure of circocoele and varicocoele, and for the relief of diseases connected with the testicles; and it is found to be worn with far more comfort and ease, than any other apparatus ever devised for the support of these organs. It is also designed to be employed under all circumstances where support is required for the testicles or cord, and it may even prove useful in preventing varicocoele in warm weather, and under the action of certain other predisposing causes of this disease.

"Frequent and troublesome as is varicocoele, we must hail with thankfulness the presence of a new and simple apparatus (Chase's Suspensory) for mitigating its discomforts, even if it should not, which this promises to do on the evidence of facts, entirely eradicate it."—*Eclectic Journal of Medicine*.

"These defects [defects in the common suspensories] are remedied in the best suspensory for varicocoele which we have seen. It was contrived by Dr. Heber Chase, &c."—*Surg. Depart. of Coates's Popular Medicine*.

For a full description of this instrument, application, mode of action, and cases treated, the reader is referred to the following work:—

"The Final Report of the Committee of the Philadelphia Medical Society, on the Construction of Instruments, and their mode of action in the *Radical Cure of Hernia* (from three years' observation); accompanied by a collection of the practical facts contained in the Preliminary Report: with notes, illustrations, and additional cases of Hernia, and diseases resembling hernia, with a Tabular Statement of 200 cases of this disease. Also, illustrations of certain instruments designed for the treatment of other diseases affecting similar parts. By Heber Chase, M.D., Member of the Academy of Natural Sciences, Honorary Member of the Philadelphia Medical Society, &c. One Vol., 8vo., pp. 243. For sale by J. G. Auner, Market street, Philadelphia."

SINGULAR CASE OF A WOMAN DELIVERED OF FIVE CHILDREN.

GIUSEPPA CALIFANI, of Naples, at the age of fourteen years and three months, was married to a man aged twenty-seven, by whom she had ten children at eight accouchments; at the fifth and sixth producing twins. She lived with her husband ten years, and remained a widow three years after his death; she then took a second husband, whose age was about twenty-nine. After two regular accouchments, upon her third pregnancy she became enormously large; so that, at seven months, she

appeared to be at the termination of her natural period. She was taken, however, at seven months, with labor pains, and brought forth successively, and by natural presentations, five living children, all of whom were baptized. The mother did not suffer anything extraordinary. Four of these children were females. The male infant was delivered first, and, after a few minutes, one female; then, after a cessation of fifteen minutes' interval between each, the other three followed. The infants much resembled each other, and were of a regular form and well grown, and very nearly of the ordinary size of a seven months' fetus; each weighed about 3½ lbs., and measured in length a French foot. The insertion of the umbilical cord was about four lines lower down than ordinarily. The placentas with their membranes were four instead of five; and each had its proper umbilical cord, except the fourth, which contained two in one large sac. The fetuses, with their membranes, placenta, and umbilical cords, are preserved in the Royal Anatomical Museum of the University of Naples. Vincenzo Lioci, of Calimera, in Otranto; Vincenzo Massari, of Molfetta, in Bari; and Dr. Antonio Scacani, of Naples, conducted the examination.—*Bul. delle Sci. Mediche.*

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BOSTON, JANUARY 29, 1840.

SOLITARY CONFINEMENT IN PRISONS.

FROM the 14th Prison Discipline Report, are gleaned the following facts. Dr. Colman, physician of the New Jersey Penitentiary, says that the prison has an average of 105½ convicts a year. The diseases for the year were these, viz.: asthma, 1; bilious fever, 3; bloody tumor, 1; constipation, mild, 26—obstinate, 1; bilious colic, 4; cough, 4; catarrhal fever, 5; dyspepsia, 4; diarrhoea, 14; dysentery, severe, 2; pleurisy, 1; rheumatism, 7. The tendency to glandular obstruction is seen in almost every prisoner who has been confined in the cells for more than a year, when he is in the least degree indisposed. The complexion is pale, of a dropsical hue, such as continued shade almost always produces, and the symptoms of disease of the internal organs are of a character that marks the languid action that prevails under such circumstances. Some post-mortem examinations have been made, and in all of them the lymphatic glands were enlarged to an enormous degree, indurated and obstructed.

Hereafter, as circumstances allow, we intend to show, by the concurrent testimony of intelligent medical attendants of American prisons, that the practice of solitary confinement, now so much in vogue in this country, is not only absolutely cruel, but barbarous. It breaks down the mind of the miserable, incarcerated being who is the subject of such diabolical treatment, deranges all the functions of the body, and if he happens to survive this modern madness of the law, he goes out into the world in a state of disease which makes life a burden, and ever after disqualifies him for active labor or mental enjoyment.

Fees of Physicians.—With all the modern improvements in the modes of transacting professional business, it is rather strange that the English plan of paying physicians has not been adopted in the United States. Here the medical practitioner goes everywhere, at every hour, night or day, without knowing even the character of his patient, and much less anything about his ability to pay for medical services. Thus scores of physicians and surgeons have worn themselves out, and died in poverty, because most of their debts were not collectable. Half of a physician's life is actually spent, both in town and country, in making visits for which he will never receive a farthing. It is quite as important that he should receive a fair compensation for his labor, as any other person who depends upon the practice of a daily avocation.

Now in England, when a medical man is requested to make a visit, it is understood that the fee is to be paid on leaving the patient, and that without deviation, even when the attendance is prolonged for weeks in succession. By this simple arrangement no debts are lost, where there is ability to pay—no system of book keeping is required—the value of a practice may be estimated, and some calculation made upon one's ability to maintain and educate a family. The whole process of practising physic in New England needs re-organization. Let the physician be paid at every visit—particularly in cities—and the sick would eventually be the gainers by it. After years of toil, hundreds of our best practitioners die in poverty, who by the simple course we advocate, would have left their families a competence. The remedy lies with our professional friends. If they demand their reasonable fees, and all concur in the same just scheme, the result will be mutually beneficial. Instead of continuing visits, as is sometimes the case, till the prospect of a formidable bill begins to alarm the sick or their friends, never make a visit unless requested to do so, from time to time. We sincerely believe that a change for the better would be brought about in this, acceptable to the whole community. Those, therefore, who have the courage to make a beginning, will first reap the great advantages arising from an equitable mode of practising medicine and surgery.

Medical Affairs in India.—Dr. Corbyn, editor of the India Medical Journal, through a gentleman who arrived in Boston, from Calcutta, on Saturday, January 11th, sent a small package, from which the following items are gleaned. It is almost certain that all our exchange India Journals, together with those designed for other periodical exchanges in the United States, which usually come to our care, were burnt at sea in the ship Harold, an account of whose destruction by fire, on her homeward bound voyage to this port, was narrated in the daily papers of last week.

A correspondence has taken place between the Medical Board and his Excellency the Commander in Chief, wherein the Board solicit that a portion of the medical patronage may be placed in its hands similarly to the vesting of authority in officers commanding regiments to appoint their own adjutant. His Excellency has refused the request, but expressed his determination to bestow lucrative appointments on the senior officers of this branch of the service.—Dr. McCosh has been appointed, or is to be, to a regiment of cavalry, of the Oudh brigade.—Dr. Jackson has been compelled to remain in the office of apothecary of the Hon. Company's service, in consequence of the non-arrival of Dr. Grant, from England.—

Mr. L. T. Watson, made Surgeon; also Mr. E. V. Davis, Assistant Surgeon.—A. Donaldson, M.D. has charge of the recruits at Agra.

Ohio Lunatic Asylum.—Whole number of patients admitted into the Asylum from the 30th of November, 1838, to the 15th of November, 1839, 157. Males, 87; females, 70. Old cases, 114; recent do., 43.* Paupers, 125; pay patients, 32. Single, 88; married, 56; widows, 11; widowers, 2. Discharged during the year:—Recovered, 27; incurable, 5; idiotic, 2; eloped, 1; died, 8—43. Number remaining in the Asylum:—males, 61; females, 53—114. Per cent. of recoveries on recent cases in 8 months, 71.43. Of those remaining in the Asylum, the prospect seems to be entirely favorable for 15; favorable for 15; doubtful for 34; unfavorable for 50.

Duration of Insanity before Admission.—Less period than one year, 43; from one to five years, 67; five to ten years, 22; ten to twenty years, 16; twenty to thirty years, 6; unknown, 3.

Age of the Patients when admitted.—Under twenty years, 7; between twenty and thirty, 71; between thirty and forty, 41; between forty and fifty, 20; between fifty and sixty, 14; between sixty and seventy, 4.

Supposed remote or exciting causes.—Intemperance, 7; domestic affliction, 6; puerperal, 13; ill health of various kinds, 14; loss of friends, 4; matrimonial perplexities, 4; fright, 3; intense application, 3; jealousy, 2; disappointed love, 10; epilepsy, 9; injuries of the head, 5; constitutional, 10; disappointment and mortification, 10; masturbation (*produced or perpetuated by the practice*), 16; fear of want, loss of property, &c., 7; ill treatment from parents or guardians, 2; religious excitement and anxiety, including perplexity, exaltation, enthusiasm, fanaticism, doubt and fear of future punishment, 15; unknown, 17.

Species of Insanity.—Mania, 101; do. melancholic variety, 17; do. epileptic, 12; do. homicidal, 4; moral insanity, 10; incoherence or dementia, 10; idiotism or imbecility, 3.

Pin lodged in the Ear.—Margaret Duff, æt. 18, was admitted into Gray's Hospital, Elgin, January 28, 1839. About a year ago, while picking her ear with a pin, she inadvertently allowed the pin to slip into her ear. Till lately she has not suffered much inconvenience from the accident, but now the pain is very distressing, and she is most anxious to have it taken out.

The ear was minutely examined and re-examined by the aid of bright metallic tubes, to throw the light into the bottom of the meatus, but not a vestige of the pin could be seen. A small speck, to be sure, was seen, but it was doubtful whether it was not a glistening point of the membrana tympani; and, in this state of uncertainty, although an attempt was made to lay hold of it, the attempt was not persevered in. Fomentations, opiates, the occasional application of leeches, as circumstances might require, were the only means that could be thought of to allay the pain, as the removal of the pin appeared impracticable.

* Cases are denominated recent or curable, when the duration of the disease is less than one year before the admission of the patient. Institutions differ much in regard to this rule, which is deserving of notice, as the result will be materially changed where the periods of three, six, or nine months are adopted.

April 30. The ear has been examined from time to time since her admission, but it was only to-day that the head of the pin could be seen; it was laid hold of by a small forceps, but it came out without the body. The ear was then washed out with warm water, but it was impossible to get a view of the body of the pin. The pain of late is so intensely severe that the patient is almost constantly moaning and screaming out. She seldom sleeps, and opiates have little effect in procuring rest or even affording any relief, although she takes to the extent of two drachms of the sedative liquor in the course of the day. For the last few days she has voided no urine without the catheter.

May 28. The pin made its appearance at the external ear to-day, and was removed; she now feels quite relieved from pain. She required the catheter till yesterday.

It is evident that the pin had penetrated the membrana tympani, and had advanced as far as its head would permit. I think the head must have fallen off from the body, and been lying at the bottom of the meatus when I laid hold of it with the forceps. It is remarkable that the long-continued and intense irritation which it kept up did not occasion suppuration in the ear.—Dr. J. PAUL, in *Lancet*.

Boston Bill of Mortality for 1839.—The whole number of deaths (including the stillborn), was 1863.—Of the diseases, 222 were consumption; 212, scarlet fever; lung fever, 82; typhous fever, 46; apoplexy, 20; convulsions, 37; croup, 46; dropsy, 87; dysentery, 30; hooping cough, 34; diseases of the heart, 29; inflammation of the bowels, 50; do. of the lungs, 18; infantile diseases, 89; intemperance, 30; delirium tremens, 8; palsy, 14; smallpox, 58; teething, 29; stillborn, 141; accidental, 16; burns, 11; child-bed, 17; drowned, 30; insanity, 3; lockjaw, 1; fractured leg, 1; fractured skull, 1; intussusception, 1; murdered, 1; old age, 63; poison by paint, 1; scalded, 4; sudden, 10; unknown diseases, 129.

Medical Miscellany.—A fine specimen of *rhizomorpha subterranea* has lately been discovered in Hertford, England, attached to the under surface of an oaken slab, which had been part of the covering of an old well, for 11 years. The rhizomorphous plants are exceedingly rare in England, but are often found in mines, pits, hollow trees, &c., on the Continent.—Messrs. Lea & Blanchard, of Philadelphia, have in press, "The Practice of Medicine," by Professor Geddings, and a Medical Account of the Springs of Virginia, by Professor Gibbon.—Deaths in Hartford, Conn., in 1839, 181, exclusive of the Almshouse and W. Hartford.—We perceive that the excellent address of our respected correspondent, Dr. Miner, to the students of Yale College, which was noticed and copied from in the Journal, has reached London, and been very favorably noticed in some of the periodicals there.—We understand that Dr. Fuller, physician of the Retreat for the Insane in Hartford, Ct., has resigned his office, and intends to establish himself as a practising physician in town.—A Stated Meeting of the Counsellors of the Massachusetts Medical Society will be held at their room, Athenaeum buildings, Pearl street, on Wednesday, Feb. 6th, at 11 o'clock, A. M.

Whole number of deaths in Boston for the week ending Jan. 25, 26. Males, 13—females, 14.
Of consumption, 4—smallpox, 2—dys., 2—lung fever, 2—variola, 1—palsy, 1—old age, 1—apoplexy,
1—typhous fever, 1—scarlet fever, 1—dropsy on the chest, 1—infantile, 1—sudden, 1—stillborn, 2.

MEDICAL TUITION.

The subscribers offer the following advantages to medical students.

Students will be allowed free access at all hours to the United States Marine Hospital at Chelsea, and will be permitted to examine and make records of all the cases that occur there. On an average there are at least sixty patients at the institution. Dr. Stedman will make a daily morning visit, and Drs. Perry, Bowditch and Wiley will, in turn, visit two afternoons every week, from March 1st to October 31st, for the purpose of clinical observation with the students. Dr. Bowditch will deliver a course of lectures upon diseases of the chest, with especial reference to the physical signs.

In addition to the above, admission will be granted to the medical and surgical visits at the Massachusetts General Hospital; to the Infirmary for Diseases of the Lungs; to the practice of one of the Dispensary districts, and to the Smallpox Hospital. Abundant opportunities for dissections and operative surgery, and occasionally for the practice of midwifery.

Regular courses of instruction will be given as follows:—

On Anatomy and Medical Jurisprudence, by	Dr. SMITH.
Surgery, by	Dr. STEDMAN.
Theory and Practice of Medicine, by	Dr. PERRY.
Midwifery, Diseases of the Chest, and Demonstrations on	Dr. BOWDITCH.
Herbid Anatomy, at the Hospital, by	Dr. WILEY.
Materia Medica and Chemistry, by	
Rooms for study, either at Boston or Chelsea, free of expense. For terms, apply to H. G. Wiley, M. S. PERRY, C. H. STEDMAN, H. G. WILEY, N. I. BOWDITCH, J. V. C. SMITH.	
Jan. 22—epitome	

MEDICAL SCHOOL OF MAINE.

The Medical Lectures at Bowdoin College will commence on Monday, the 17th day of February, 1888, and continue three months.

Anatomy and Surgery, by JOSEPH ROBT. M.D.

Theory and Practice of Physics, by JOHN DELANATH, M.D.

Obstetrics, by HENRIETTA WEBER, M.D.

Chemistry and Materia Medica, by PARKER ORRILLIANT, M.D.

The Library contains 3000 volumes, and is annually increasing.

Every person becoming a member of this institution, is required previously to present satisfactory evidence of possessing a good moral character.

The amount of fees for the Lectures is \$50, payable in advance.

Degrees are conferred at the close of the Lecture Term in May, and at the following Commencement of the College in September.

Brunswick, Me. Nov. 1, 1887.

N 27—epit

P. CLEVELAND, Secretary.

PRIVATE MEDICAL INSTRUCTION.

The subscribers are associated for the purpose of giving a complete course of medical instruction. Their pupils will have regular access to the medical and surgical practice of the Massachusetts General Hospital. They will be admitted, also, to the practice of the House of Correction, which constantly presents a large number of important cases, and where opportunities will be afforded for acquiring a practical knowledge of compounding and dispensing medicines. They will be furnished with opportunities for the study of Practical Anatomy, not inferior to any in the country. To the pupils, particularly to those in the last year of their professional studies, facilities will be afforded for acquiring a personal acquaintance with private medical and obstetric practice. Instruction by examinations or lectures will be given in the different branches of medical studies, during the interval between the public lectures of the University. Books, and a room with fire and lights, will be furnished to the students at the expense of the instructors.

GEORGE C. SHATTUCK,
WALTER CHANNING,
JOHN WARR,
GEORGE W. OTIS, Jr.,
WINLOW LEWIS, Jr.

Oct. 21—epit

VERMONT ACADEMY OF MEDICINE.

Lectures will commence in this institution on the second Tuesday of March, 1888, and continue thirteen weeks.

Theory and Practice of Medicine, by HORACE GRAY, M.D., N. Y. City.

General and Special Anatomy and Physiology, by ROBERT NALSON, M.D., St. Albans, Vt.

Chemistry and Pharmacy, by JAMES HASLON, M.D., Fekfield, N. Y.

Principles and Practice of Surgery, by JAMES EVAN, M.D., Philadelphia.

Materia Medica and Obstetrics, by JOSEPH FERRIS, M.D., Castleton, Vt.

Medical Jurisprudence, by RALPH GOWNEY, M.D., Middlebury, Vt.

The fee for all the courses is \$50. Matriculation fee, \$4. Graduation fee, \$11.

Castleton, Vt., Jan. 1888.

J 15—cm

JOSEPH FERRIS, Registrar.

VACCINE VIRUS.

PHOTODUPLICATIONS in any section of the United States can procure ten quills charged with PURE VACCINE VIRUS, by return mail, on addressing the Editor of the Boston Medical and Surgical Journal, enclosing one dollar, post paid, without which no letter will be taken from the post office.

June 19

THE BOSTON MEDICAL AND SURGICAL JOURNAL is published every Wednesday, by D. CLAPP, JR., at 181 Washington St., corner of Franklin St., to whom all communications must be addressed, post paid. It is also published in Monthly Parts, with a printed cover. There are two volumes each year. J. V. C. SMITH, M.D., Editor. Price \$3.00 a year in advance, \$3.50 after three months, or \$4.00 if not paid within the year. Two copies to the same address, for \$6.00 a year in advance. Orders from a distance must be accompanied by payment in advance or satisfactory references. Postage the same as for a newspaper.